



## SEQUENCE LISTING

#M

<110> Prayaga, Sudhirdas  
Shimkets, Richard

<120> NOVEL INTERFERON OMEGA AND NUCLEIC ACIDS ENCODING SAME

<130> 15966-615

<140> 09/732,436  
<141> 2000-12-07

<150> 60/169,887  
<151> 1999-12-09

<150> 60/170,230  
<151> 1999-12-10

<160> 22

<170> PatentIn Ver. 2.1

<210> 1  
<211> 475  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Curagen clone  
AC015663\_A

<400> 1

Ala Cys Cys Ala Ala Thr Gly Gly Thr Cys Thr Cys Cys Thr Thr Gly  
1 5 10 15

Cys Thr Gly Gly Thr Gly Gly Cys Ala Thr Thr Gly Gly Thr Gly Ala  
20 25 30

Thr Gly Ala Thr Cys Thr Cys Cys Thr Gly Cys Cys Ala Cys Ala Thr  
35 40 45

Cys Thr Ala Thr Thr Cys Cys Cys Thr Thr Thr Cys Thr Gly Cys  
50 55 60

Gly Ala Cys Cys Thr Gly Cys Cys Thr Ala Ala Ala Gly Cys Thr Cys  
65 70 75 80

Ala Gly Gly Thr Gly Ala Thr Thr Cys Thr Gly Cys Cys Cys Thr

85

90

95

Cys Cys Ala Thr Ala Ala Gly Ala Thr Gly Cys Ala Cys Cys Ala Gly  
100 105 110

Cys Ala Gly Ala Thr Cys Thr Thr Cys Ala Gly Cys Cys Thr Cys Thr  
115 120 125

Thr Thr Thr Ala Cys Ala Cys Ala Gly Gly Gly Cys Thr  
130 135 140

Gly Thr Cys Thr Gly Ala Thr Gly Cys Thr Thr Gly Gly Ala Ala Thr  
145 150 155 160

Ala Gly Gly Cys Cys Thr Thr Cys Cys Thr Gly Gly Ala Cys Ala  
165 170 175

Ala Ala Cys Thr Cys Cys Ala Gly Ala Cys Thr Gly Gly Ala Thr Thr  
180 185 190

Thr Cys Ala Thr Cys Ala Gly Cys Ala Gly Cys Thr Gly Gly Ala Ala  
195 200 205

Gly Ala Cys Cys Thr Gly Gly Ala Cys Cys Cys Thr Gly Cys Thr  
210 215 220

Thr Thr Gly Gly Thr Ala Thr Ala Gly Ala Gly Gly Ala Thr Gly Gly  
225 230 235 240

Gly Ala Ala Gly Cys Ala Ala Gly Ala Gly Thr Cys Thr Gly Cys Cys  
245 250 255

Cys Thr Gly Gly Ala Ala Ala Thr Thr Gly Ala Gly Gly Cys Cys  
260 265 270

Cys Thr Ala Cys Ala Cys Thr Gly Gly Cys Cys Ala Thr Ala Ala Ala  
275 280 285

Gly Ala Gly Gly Thr Ala Cys Thr Thr Cys Cys Ala Gly Gly Gly Ala  
290 295 300

Gly Thr Ala Cys Ala Thr Thr Cys Thr Thr Cys Thr Thr Gly Ala  
305 310 315 320

Ala Ala Gly Ala Gly Ala Ala Ala Thr Thr Cys Ala Gly  
325 330 335

Gly Ala Ala Cys Thr Gly Thr Ala Cys Cys Thr Gly Gly Ala Gly

340

345

350

Gly Thr Thr Gly Thr Cys Gly Thr Ala Ala Thr Gly Gly Thr Ala Ala  
355 360 365

Ala Gly Gly Gly Ala Thr Thr Thr Thr Cys Thr Thr Ala Ala Gly  
370 375 380

Cys Ala Cys Ala Ala Ala Ala Cys Thr Thr Cys Ala Ala Gly Ala Ala  
385 390 395 400

Ala Ala Ala Gly Ala Gly Ala Ala Cys Ala Gly Ala Ala Gly Ala Ala  
405 410 415

Ala Ala Gly Ala Gly Ala Ala Cys Thr Gly Cys Ala Ala Ala Ala Ala  
420 425 430

Ala Ala Ala Thr Cys Thr Gly Gly Ala Ala Ala Ala Gly Gly Thr Ala  
435 440 445

Ala Thr Cys Thr Ala Thr Thr Ala Gly Cys Ala Gly Ala Ala Gly  
450 455 460

Ala Gly Thr Gly Ala Ala Ala Gly Cys Thr Gly  
465 470 475

<210> 2

<211> 610

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Curagen clone

<400> 2

Ala Cys Cys Ala Ala Thr Gly Gly Thr Cys Thr Cys Cys Thr Thr Gly  
1 5 10 15

Cys Thr Gly Gly Thr Gly Gly Cys Ala Thr Thr Gly Gly Thr Gly Ala  
20 25 30

Thr Gly Ala Thr Cys Thr Cys Cys Thr Gly Cys Cys Ala Cys Ala Thr  
35 40 45

Cys Thr Ala Thr Thr Cys Cys Cys Thr Thr Thr Cys Thr Gly Cys  
50 55 60

Gly Ala Cys Cys Thr Gly Cys Cys Thr Asn Asn Asn Asn Asn Asn  
65 70 75 80

Asn  
85 90 95

Asn  
100 105 110

Asn  
115 120 125

Asn  
130 135 140

Asn  
145 150 155 160

Asn  
165 170 175

Asn  
180 185 190

Asn  
195 200 205

Ala Ala Ala Gly Cys Thr Cys Ala Gly Gly Thr Gly Ala Thr Thr Thr  
210 215 220

Cys Thr Gly Cys Cys Cys Thr Cys Cys Ala Thr Ala Ala Gly Ala Thr  
225 230 235 240

Gly Cys Ala Cys Cys Ala Gly Cys Ala Gly Ala Thr Cys Thr Thr Cys  
245 250 255

Ala Gly Cys Cys Thr Cys Thr Thr Thr Thr Ala Cys Ala Cys Ala  
260 265 270

Ala Gly Gly Cys Thr Thr Gly Thr Cys Thr Gly Ala Thr Gly Cys  
275 280 285

Thr Thr Gly Gly Ala Ala Thr Ala Gly Gly Cys Cys Thr Thr Cys  
290 295 300

Cys Thr Gly Gly Ala Cys Ala Ala Cys Thr Cys Cys Ala Gly Ala  
305 310 315 320

Cys Thr Gly Gly Ala Thr Thr Thr Cys Ala Thr Cys Ala Gly Cys Ala  
325 330 335

Gly Cys Thr Gly Gly Ala Ala Gly Ala Cys Cys Thr Gly Gly Ala Gly  
340 345 350

Ala Cys Cys Thr Gly Cys Thr Thr Gly Gly Thr Ala Thr Ala Gly  
355 360 365

Ala Gly Gly Ala Thr Gly Gly Ala Ala Gly Cys Ala Ala Gly Ala  
370 375 380

Gly Thr Cys Thr Gly Cys Cys Cys Thr Gly Gly Ala Ala Ala Thr Thr  
385 390 395 400

Gly Ala Gly Gly Gly Cys Cys Cys Thr Ala Cys Ala Cys Thr Gly Gly  
405 410 415

Cys Cys Ala Thr Ala Ala Ala Gly Ala Gly Gly Thr Ala Cys Thr Thr  
420 425 430

Cys Cys Ala Gly Gly Ala Gly Thr Ala Cys Ala Thr Thr Thr Cys  
435 440 445

Thr Thr Cys Thr Thr Gly Ala Ala Ala Gly Ala Gly Gly Ala  
450 455 460

Ala Ala Thr Thr Cys Ala Gly Gly Ala Ala Cys Thr Gly Thr Ala Cys  
465 470 475 480

Cys Thr Gly Gly Ala Gly Gly Thr Thr Gly Thr Cys Gly Thr Ala  
485 490 495

Ala Thr Gly Gly Thr Ala Ala Ala Gly Gly Gly Ala Thr Thr Thr Thr  
500 505 510

Thr Cys Thr Thr Ala Ala Gly Cys Ala Cys Ala Ala Ala Cys Thr  
515 520 525

Thr Cys Ala Ala Gly Ala Ala Ala Ala Gly Ala Gly Ala Ala Cys  
530 535 540

Ala Gly Ala Ala Gly Ala Ala Ala Ala Gly Ala Gly Ala Ala Cys Thr  
545 550 555 560

Gly Cys Ala Ala Ala Ala Ala Ala Ala Thr Cys Thr Gly Gly Ala  
565 570 575

Ala Ala Ala Gly Gly Thr Ala Ala Thr Cys Thr Ala Thr Thr Ala  
580 585 590

Gly Cys Ala Gly Ala Ala Gly Ala Gly Thr Gly Ala Ala Ala Gly Cys  
595 600 605

Thr Gly  
610

<210> 3  
<211> 1887  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Curagen clone  
AF038458\_A

<400> 3  
atggccatcc tcccgttgct cctgtgcctg ctggcgctgg cccctgcctc atccccaccc 60  
cagtcagcca caccaggccc atgtccccgc cgctgccgt gccagacaca gtgcgtgcc 120  
ctaagcgtgc tgtgcccagg ggcaggcctc ctgttgcgtgc caccctcgct ggaccgccc 180  
gcagccgagc tgccgtggc agacaacttc atgcctccg tgccgcgcg cgacctggcc 240  
aacatgacag gcctgtgcga tctgagcctg tcgcggaaaca ccattcccca cgtggctgcc 300  
ggcgccttcg ccgacctgcg ggcctgcgt gcctgcacc tggatggcaa ccggctgacc 360  
tcactggcg aggcccagct ggcggcctg gtcaacttgc gccacccat cctcagcaac 420  
aaccagctgg cagcgctggc ggcggcgcc ctggatgatt gtgcgcgagac actggaggac 480  
ctcgacctct cctacaacaa cctcgagcag ctgcctttgg aggccttgg ccgcctggc 540  
aacgtcaaca cgttggccct cgaccacaac ctgctggctt ctgtgcggc cggcgcttt 600  
tcccgcctgc acaagctggc ccggctggac atgacccatcc accgcctgac cacaatccca 660  
cccgacccac tcttctcccg cctgccttcg ctgcggcaggc cccggggctc gcccgcctct 720  
gcctgggtgc tggcctttgg cgggaacccc ctgcactgca actgcgcgact ggtgtggctg 780  
cgtcgcctgg cgccggagga cgacctcgag gcctgcgcgt ccccacctgc tctggcgcc 840  
cgctacttct gggcggtggg cgaggaggag tttgtctgcg agccgcggcgt ggtgactcac 900  
cgctcaccac ctctggctgt gcccgcaggc cggccggctg ccctgcgcgt ccggcgactg 960  
ggggacccag agcccggtgt gcgttgggtg tcaccccaagg gccggctgct aggcaactca 1020  
agccgtgccg gcgccttccc caatggacg ctggagctgc tggcaccga gccgggtgat 1080  
ggtggcatct tcacctgcat tgcggccaat gcagctggcg aggccacagc tgctgtggag 1140  
ctgactgtgg gtcccccaacc acctcctcag ctgcggccaa gcaaccgcgt tgacccccc 1200  
cgggacgggg atcctgatgc tctcaccctt ccctccgcgt cctctgcgtc tgccaaagggt 1260  
gccgacactg ggccccctac cgaccgtggc gtccaggtga ctgagcacgg gcccacagct 1320  
gctctgtcc agtggccgga tcagcgccct atcccggtca tccgcgtatcc ctagatccag 1380  
tacaacagct cggtgtatga catcctcgta tacaggatga tcccgccgga gagccgcgtc 1440  
ttcctgtgtc cggacactggc gtcaggccgg acctacgatc tggcgtgtc cggcggttat 1500  
gaggacagcg ccacggggct cacggccacg cggccgtgtgg gctgcggccg cttctccacc 1560  
gaacacctgcg tgcggccatg cggggcgccg cacgctccct tcctggcg gacgatgatc 1620  
atcgcgtgg cggcgactcat cgtacgtgtcgt tcatcttcgt gctgctaatt 1680

cgctacaagg tgcacggcgg ccagccccc ggcaaggcca agattccgc gcctgttagc 1740  
agcgtttgc cccagaccaa cggcgccctg ggccccacgc ccacgcccgc cccgcccccc 1800  
ccggagcccg cggcgctcag ggcccacacc gtggtccagc tggactgcga gccctggggg 1860  
cccggccacg aacctgtggg accctag 1887

<210> 4  
<211> 365  
<212> PRT  
<213> Equus caballus

<400> 4  
Thr Cys Cys Cys Ala Gly Ala Gly Gly Cys Cys Cys Ala Gly Gly Cys  
1 5 10 15  
  
Cys Gly Cys Gly Thr Cys Thr Gly Thr Cys Cys Thr Cys Cys Ala Cys  
20 25 30  
  
Gly Ala Gly Ala Thr Gly Cys Thr Cys Cys Ala Gly Cys Ala Gly Ala  
35 40 45  
  
Thr Cys Thr Thr Cys Ala Gly Cys Cys Thr Cys Thr Thr Cys Cys Ala  
50 55 60  
  
Cys Ala Cys Ala Gly Ala Gly Cys Gly Cys Thr Cys Gly Thr Cys Thr  
65 70 75 80  
  
Gly Cys Thr Gly Cys Cys Thr Gly Gly Ala Ala Cys Ala Cys Gly Ala  
85 90 95  
  
Cys Cys Cys Thr Cys Cys Thr Gly Gly Ala Cys Gly Ala Ala Cys Thr  
100 105 110  
  
Cys Thr Gly Cys Ala Cys Gly Gly Ala Cys Thr Cys Cys Thr Thr  
115 120 125  
  
Cys Gly Gly Cys Ala Gly Cys Thr Gly Gly Ala Ala Gly Ala Cys Cys  
130 135 140  
  
Thr Gly Gly Ala Cys Ala Cys Cys Thr Gly Thr Thr Thr Gly Gly Ala  
145 150 155 160  
  
Gly Cys Ala Gly Gly Ala Gly Ala Thr Gly Gly Gly Ala Gly Ala Gly  
165 170 175  
  
Gly Ala Ala Gly Ala Ala Thr Cys Thr Gly Cys Cys Cys Thr Gly Gly  
180 185 190

Gly Ala Ala Cys Thr Gly Thr Gly Cys Gly Cys Cys Cys Thr Ala Cys  
195 200 205

Ala Cys Thr Gly Gly Cys Cys Gly Thr Gly Ala Ala Gly Ala Gly Gly  
210 215 220

Thr Ala Cys Thr Thr Cys Cys Gly Gly Gly Ala Thr Cys Cys  
225 230 235 240

Ala Thr Cys Thr Cys Thr Ala Cys Cys Thr Gly Ala Ala Ala Gly Ala  
245 250 255

Gly Ala Ala Gly Ala Ala Ala Thr Ala Cys Ala Gly Thr Gly Ala Cys  
260 265 270

Thr Gly Thr Gly Cys Cys Thr Gly Gly Gly Ala Gly Ala Thr Thr Gly  
275 280 285

Thr Cys Cys Gly Ala Ala Thr Gly Gly Ala Ala Ala Thr Cys Ala Thr  
290 295 300

Gly Ala Gly Ala Thr Cys Cys Thr Thr Cys Thr Cys Thr Thr Cys Ala  
305 310 315 320

Thr Cys Ala Gly Cys Ala Ala Ala Cys Cys Thr Gly Cys Ala Ala Gly  
325 330 335

Gly Ala Ala Gly Gly Thr Thr Ala Ala Gly Ala Ala Thr Gly Ala Ala  
340 345 350

Gly Gly Ala Thr Gly Gly Ala Gly Ala Cys Cys Thr Gly  
355 360 365

<210> 5  
<211> 132  
<212> PRT  
<213> Homo sapiens

<400> 5  
Met Ala Leu Leu Phe Pro Leu Leu Ala Ala Leu Val Met Thr Ser Tyr  
1 5 10 15

Ser Pro Val Gly Ser Leu Gly Cys Asp Leu Pro Gln Asn His Gly Leu  
20 25 30

Leu Ser Arg Asn Thr Leu Val Phe Pro Gln Glu Met Val Lys Gly Ser  
35 40 45

Gln Leu Gln Lys Ala His Val Met Ser Val Leu His Glu Met Leu Gln  
50 55 60

Gln Ile Phe Ser Leu Phe His Thr Glu Arg Ser Ser Ala Ala Thr Cys  
65 70 75 80

Leu Leu Gln Val Val Gly Glu Gly Glu Ser Ala Gly Ala Ile Ser Ser  
85 90 95

Pro Ala Leu Thr Leu Arg Arg Tyr Phe Gln Gly Ile Arg Val Tyr Leu  
100 105 110

Lys Glu Lys Lys Tyr Met Gln Glu Arg Leu Arg Ser Lys Asp Arg Asp  
115 120 125

Leu Gly Ser Ser  
130

<210> 6

<211> 132

<212> PRT

<213> Equus caballus

<400> 6

Met Ala Phe Ser Val Ser Ser Leu Met Ala Leu Val Val Ile Ser Ser  
1 5 10 15

Ser Pro Val Ser Ser Met Ser Cys Asp Leu Pro Ala Ser Leu Asp Leu  
20 25 30

Arg Lys Gln Glu Thr Leu Arg Phe Pro Gln Glu Gln Leu Asp Gly Arg  
35 40 45

Gln Phe Pro Glu Ala Gln Ala Thr Ser Val Leu Gln Glu Met Leu Gln  
50 55 60

Gln Ile Val Ser Leu Phe His Thr Glu Arg Ser Ser Ala Ala Thr Cys  
65 70 75 80

Leu Asp Glu Gln Thr Gly Glu Glu Ser Ala Leu Gly Thr Val Gly  
85 90 95

Pro Thr Leu Ala Val Lys Arg Tyr Phe Arg Arg Ile Arg Leu Tyr Leu  
100 105 110

Thr Glu Lys Lys Tyr Leu Gln Gly Arg Leu Gly Met Lys Asp Gly Asp

115

120

125

Leu Gly Ser Pro  
130

<210> 7  
<211> 475  
<212> PRT  
<213> Homo sapiens

<400> 7  
Ala Cys Cys Ala Ala Thr Gly Gly Thr Cys Thr Cys Cys Thr Thr Gly  
1               5                           10                           15  
  
Cys Thr Gly Gly Thr Gly Gly Cys Ala Thr Thr Gly Gly Thr Gly Ala  
20               25                           30  
  
Thr Gly Ala Thr Cys Thr Cys Cys Thr Gly Cys Cys Ala Cys Ala Thr  
35               40                           45  
  
Cys Thr Ala Thr Thr Cys Cys Cys Thr Thr Thr Cys Thr Gly Cys  
50               55                           60  
  
Gly Ala Cys Cys Thr Gly Cys Cys Thr Ala Ala Ala Gly Cys Thr Cys  
65               70                           75                           80  
  
Ala Gly Gly Thr Gly Ala Thr Thr Cys Thr Gly Cys Cys Cys Thr  
85               90                           95  
  
Cys Cys Ala Thr Ala Ala Gly Ala Thr Gly Cys Ala Cys Cys Ala Gly  
100              105                           110  
  
Cys Ala Gly Ala Thr Cys Thr Thr Cys Ala Gly Cys Cys Cys Thr Cys Thr  
115              120                           125  
  
Thr Thr Thr Ala Cys Ala Cys Ala Ala Gly Gly Gly Cys Thr Thr  
130              135                           140  
  
Gly Thr Cys Thr Gly Ala Thr Gly Cys Thr Thr Gly Gly Ala Ala Thr  
145              150                           155                           160  
  
Ala Gly Gly Cys Cys Thr Thr Cys Cys Thr Gly Gly Ala Cys Ala  
165              170                           175  
  
Ala Ala Cys Thr Cys Cys Ala Gly Ala Cys Thr Gly Gly Ala Thr Thr  
180              185                           190

Thr Cys Ala Thr Cys Ala Gly Cys Ala Gly Cys Thr Gly Gly Ala Ala  
195 200 205

Gly Ala Cys Cys Thr Gly Gly Ala Gly Ala Cys Cys Thr Gly Cys Thr  
210 215 220

Thr Thr Gly Gly Thr Ala Thr Ala Gly Ala Gly Gly Ala Thr Gly Gly  
225 230 235 240

Gly Ala Ala Gly Cys Ala Ala Gly Ala Gly Thr Cys Thr Gly Cys Cys  
245 250 255

Cys Thr Gly Gly Ala Ala Ala Thr Thr Gly Ala Gly Gly Gly Cys Cys  
260 265 270

Cys Thr Ala Cys Ala Cys Thr Gly Gly Cys Cys Ala Thr Ala Ala Ala  
275 280 285

Gly Ala Gly Gly Thr Ala Cys Thr Thr Cys Cys Ala Gly Gly Gly Ala  
290 295 300

Gly Thr Ala Cys Ala Thr Thr Cys Thr Thr Cys Thr Thr Gly Ala  
305 310 315 320

Ala Ala Gly Ala Gly Ala Gly Ala Ala Ala Thr Thr Cys Ala Gly  
325 330 335

Gly Ala Ala Cys Thr Gly Thr Ala Cys Cys Thr Gly Gly Gly Ala Gly  
340 345 350

Gly Thr Thr Gly Thr Cys Gly Thr Ala Ala Thr Gly Gly Thr Ala Ala  
355 360 365

Ala Gly Gly Ala Thr Thr Cys Thr Thr Ala Ala Gly  
370 375 380

Cys Ala Cys Ala Ala Ala Ala Cys Thr Thr Cys Ala Ala Gly Ala Ala  
385 390 395 400

Ala Ala Ala Gly Ala Gly Ala Ala Cys Ala Gly Ala Ala Gly Ala Ala  
405 410 415

Ala Ala Gly Ala Gly Ala Ala Cys Thr Gly Cys Ala Ala Ala Ala Ala  
420 425 430

Ala Ala Ala Thr Cys Thr Gly Gly Ala Ala Ala Ala Gly Gly Thr Ala  
435 440 445

Ala Thr Cys Thr Ala Thr Thr Ala Gly Cys Ala Gly Ala Ala Gly  
450 455 460

Ala Gly Thr Gly Ala Ala Ala Gly Cys Thr Gly  
465 470 475

<210> 8

<211> 70

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_difference

<222> (1)..(70)

<223> n is the single letter notation for Asparagine

<400> 8

shkaasvvhv tnkhctasss aawnttctgd rtracvvgat ndhdsrnnyrs ykkyscawvr 60  
amrsyyssta 70

<210> 9

<211> 112

<212> PRT

<213> Unknown

<220>

<223> Description of Unknown Organism: Interferon  
Delta-1 Precursor

<400> 9

Leu Gln Glu Ala Gln Ala Ile Ser Val Leu His Glu Met Leu Gln Gln  
1 5 10 15

Ser Phe Asn Leu Phe His Thr Glu His Ser Ser Ala Ala Trp Asp Thr  
20 25 30

Thr Leu Leu Glu Pro Cys Arg Thr Gly Leu His Gln Gln Leu Asp Asn  
35 40 45

Leu Asp Ala Cys Leu Gly Gln Val Met Gly Glu Asp Ser Ala Leu  
50 55 60

Gly Arg Thr Gly Pro Thr Leu Ala Leu Lys Arg Tyr Phe Gln Gly Ile  
65 70 75 80

His Val Tyr Leu Lys Glu Lys Gly Tyr Ser Asp Cys Ala Trp Glu Thr

85

90

95

Val Arg Leu Glu Ile Met Arg Ser Phe Ser Ser Leu Ile Ser Leu Gln  
100 105 110

<210> 10  
<211> 112  
<212> PRT  
<213> Unknown

<220>  
<223> Description of Unknown Organism: Interferon  
Omega-2 Precursor (Interferon Alpha-II-2)

<400> 10  
Phe Pro Glu Ala Gln Ala Ala Ser Val Leu His Glu Met Leu Gln Gln  
1 5 10 15

Ile Phe Ser Leu Phe His Thr Glu Arg Ser Ser Ala Ala Trp Asn Thr  
20 25 30

Thr Leu Leu Asp Glu Leu Cys Thr Gly Leu Leu Arg Gln Leu Glu Asp  
35 40 45

Leu Asp Thr Cys Leu Glu Gln Glu Met Gly Glu Glu Ser Ala Leu  
50 55 60

Gly Thr Val Arg Pro Thr Leu Ala Val Lys Arg Tyr Phe Arg Gly Ile  
65 70 75 80

His Leu Tyr Leu Lys Glu Lys Tyr Ser Asp Cys Ala Trp Glu Ile  
85 90 95

Val Arg Met Glu Ile Met Arg Ser Phe Ser Ser Ala Asn Leu Gln  
100 105 110

<210> 11  
<211> 112  
<212> PRT  
<213> Unknown

<400> 11

Leu Gln Lys Ala His Val Met Ser Val Leu His Glu Met Leu Gln Gln  
1 5 10 15

Ile Phe Ser Leu Phe His Thr Glu Arg Ser Ser Ala Ala Trp Asn Met  
20 25 30

Thr Leu Leu Asp Gln Leu His Thr Gly Leu His Gln Gln Leu Gln His  
35 40 45

Leu Glu Thr Cys Leu Leu Gln Val Val Gly Glu Gly Glu Ser Ala Gly  
50 55 60

Ala Ile Ser Ser Pro Ala Leu Thr Leu Arg Arg Tyr Phe Gln Gly Ile  
65 70 75 80

Arg Val Tyr Leu Lys Glu Lys Tyr Ser Asp Cys Ala Trp Glu Val  
85 90 95

Val Arg Met Glu Ile Met Lys Ser Leu Phe Leu Ser Thr Asn Met Gln  
100 105 110

<210> 12

<211> 65

<212> PRT

<213> Unknown

<220>

<223> Description of Unknown Organism: Interferon

<400> 12

Ala Gln Ser Val Leu His Met Gln Gln Ile Phe Leu Phe Thr Glu Ser  
1 5 10 15

Ser Ala Ala Trp Asn Thr Leu Leu Thr Gly Leu Gln Leu Cys Gln  
20 25 30

Gly Glu Glu Ser Ala Leu Pro Leu Arg Tyr Phe Gln Gly Tyr Leu Lys  
35 40 45

Glu Lys Lys Tyr Ser Cys Ala Trp Glu Val Arg Glu Ile Met Ser Leu  
50 55 60

Gln

65

<210> 13

<211> 110

<212> PRT

<213> Homo sapiens

<400> 13

Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln Gln Phe Gln Lys  
1 5 10 15

Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala  
20 25 30

Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val  
35 40 45

Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr  
50 55 60

Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu  
65 70 75 80

Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile Leu His Tyr  
85 90 95

Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr Ile Val  
100 105 110

<210> 14

<211> 109

<212> PRT

<213> Homo sapiens

<400> 14

Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln Lys Ala  
1 5 10 15

Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe Asn Leu  
20 25 30

Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu Leu Asp  
35 40 45

Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys

50

55

60

Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Asn Glu Asp  
65 70 75 80

Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu  
85 90 95

Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val  
100 105

<210> 15

<211> 110

<212> PRT

<213> Unknown

<220>

<223> Description of Unknown Organism: Interferon  
Alpha-1 Precursor

<400> 15

Asp Phe Gly Phe Pro Gln Glu Lys Val Asp Ala Gln Gln Ile Lys Lys  
1 5 10 15

Ala Gln Ala Ile Pro Val Leu Ser Glu Leu Thr Gln Gln Ile Leu Asn  
20 25 30

Ile Phe Thr Ser Lys Asp Ser Ser Ala Ala Trp Asn Ala Thr Leu Leu  
35 40 45

Asp Ser Phe Cys Asn Asp Leu His Gln Gln Leu Asn Asp Leu Gln Gly  
50 55 60

Cys Leu Met Gln Gln Val Gly Val Gln Glu Phe Pro Leu Thr Gln Glu  
65 70 75 80

Asp Ala Leu Leu Ala Val Arg Lys Tyr Phe His Arg Ile Thr Val Tyr  
85 90 95

Leu Arg Glu Lys Lys His Ser Pro Cys Ala Trp Glu Val Val  
100 105 110

<210> 16

<211> 110

<212> PRT

<213> Rabbitt Interferon-omega20

<400> 16

Asp Phe Gln Phe Pro Arg Glu Val Val Asn Gly Ser Gln Phe Gln Lys  
1 5 10 15

Asn Gln Thr Val Ser Val Leu His Glu Met Leu Gln Gln Ile Phe Asn  
20 25 30

Leu Leu His Thr Ala Arg Ser Ser Ala Ala Trp Asn Asn Thr Leu Leu  
35 40 45

Glu Glu Leu His Thr Ala Leu His Gln Gln Leu Gln Gly Leu Glu Thr  
50 55 60

Cys Leu Val Gln Ala Met Gly Glu Glu Asp Ser Val Leu Thr Ala Asp  
65 70 75 80

Ser Pro Met Leu Met Leu Lys Arg Tyr Phe Gln Arg Ile Arg Leu Tyr  
85 90 95

Leu Asp Glu Lys Lys His Ser Gly Cys Ala Trp Glu Leu Val  
100 105 110

<210> 17

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Concensus of  
SEQ ID NO:1 and SEQ ID NOS:16-19

<400> 17

Phe Pro Glu Gln Lys Leu Glu Met Gln Gln Ile Phe Phe Ser Ser Ala  
1 5 10 15

Trp Asn Thr Leu Gln Gln Leu Leu Cys Gly Leu Leu Tyr Phe Arg Ile  
20 25 30

Tyr Leu Glu Lys Lys Ser Cys Ala Trp Glu Val  
35 40

<210> 18

<211> 184

<212> PRT

<213> Unknown

<220>

<223> Description of Unknown Organism: Interferon  
Alpha-1 Precursor

<400> 18

Val Ser Leu Leu Met Ala Leu Val Val Leu Ser Cys His Ser Ile Cys  
1 5 10 15

Ser Leu Gly Cys Asp Leu Pro His Thr His Ser Leu Gly Asn Thr Arg  
20 25 30

Val Leu Met Leu Leu Gly Gln Met Arg Arg Ile Ser Pro Phe Ser Cys  
35 40 45

Leu Lys Asp Arg Asn Asp Phe Gly Phe Pro Gln Glu Val Phe Asp Gly  
50 55 60

Asn Gln Phe Arg Lys Pro Gln Ala Ile Ser Ala Val His Glu Thr Ile  
65 70 75 80

Gln Gln Ile Phe His Leu Phe Ser Thr Asp Gly Ser Ser Ala Ala Trp  
85 90 95

Asp Glu Ser Leu Leu Asp Lys Leu Tyr Thr Gly Leu Tyr Gln Gln Leu  
100 105 110

Thr Glu Leu Glu Ala Cys Leu Ser Gln Glu Val Gly Val Glu Glu Thr  
115 120 125

Pro Leu Met Asn Glu Asp Ser Leu Leu Ala Val Arg Arg Tyr Phe Gln  
130 135 140

Arg Ile Ala Leu Tyr Leu Gln Glu Lys Lys Tyr Ser Pro Cys Ala Trp  
145 150 155 160

Glu Ile Val Arg Ala Glu Ile Met Arg Ser Phe Ser Ser Ser Thr Asn  
165 170 175

Leu Pro Ser Glu Gln Ile Asp Asn  
180

<210> 19

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Consensus of  
SEQ ID NO:4 and SEQ ID NOS:11, 13, 14, 21 and 22

<400> 19

Ser Leu Leu Ala Leu Val Ser Leu Gly Cys Asp Leu Pro His Leu Leu  
1 5 10 15

Leu Gln Met Arg Cys Lys Asp Arg Asp Phe Phe Pro Gln Gly Gln Lys  
20 25 30

Ala Gln Ser His Gln Gln Ile Phe Leu Phe Thr Ser Ser Ala Ala Trp  
35 40 45

Asn Leu Leu Asp Leu Thr Gly Leu Gln Leu Leu Glu Cys Gln Glu Gly  
50 55 60

Glu Leu Leu Arg Tyr Phe Gln Tyr Leu Glu Lys Lys Tyr Ser Cys Ala  
65 70 75 80

Trp Glu Val Arg Glu Ile Met Ser Ser Thr Leu Gln  
85 90

<210> 20

<211> 1752

<212> PRT

<213> Homo sapiens

<400> 20

Cys Gly Cys Cys Thr Gly Cys Cys Cys Cys Ala Ala Gly Thr Ala Cys  
1 5 10 15

Thr Gly Thr Gly Thr Cys Thr Gly Cys Cys Ala Gly Ala Ala Thr Cys  
20 25 30

Thr Gly Thr Cys Thr Gly Ala Gly Thr Cys Ala Cys Thr Gly Gly Gly  
35 40 45

Gly Ala Cys Cys Cys Thr Gly Thr Gly Cys Cys Cys Cys Thr Cys Cys  
50 55 60

Ala Ala Gly Gly Gly Cys Thr Gly Cys Thr Cys Thr Thr Thr Gly  
65 70 75 80

Thr Ala Cys Cys Cys Cys Cys Thr Gly Ala Thr Ala Thr Thr Gly Ala  
85 90 95

Cys Cys Gly Gly Cys Gly Ala Cys Ala Gly Thr Gly Gly Ala Gly  
100 105 110

Cys Thr Gly Cys Gly Cys Cys Thr Gly Gly Gly Cys Gly Gly Cys Ala  
115 120 125

Ala Cys Thr Thr Cys Ala Thr Cys Ala Thr Cys Cys Ala Cys Ala Thr  
130 135 140

Cys Ala Gly Cys Cys Gly Cys Cys Ala Gly Gly Ala Cys Thr Thr Thr  
145 150 155 160

Gly Cys Cys Ala Ala Cys Ala Thr Gly Ala Cys Gly Gly Gly Cys  
165 170 175

Thr Gly Gly Thr Gly Gly Ala Cys Cys Thr Gly Ala Cys Cys Cys Thr  
180 185 190

Gly Thr Cys Cys Ala Gly Gly Ala Ala Cys Ala Cys Cys Ala Thr Cys  
195 200 205

Ala Gly Cys Cys Ala Cys Ala Thr Cys Cys Ala Gly Cys Cys Cys Thr  
210 215 220

Thr Thr Thr Cys Cys Thr Thr Thr Cys Thr Gly Gly Ala Cys Cys Thr  
225 230 235 240

Cys Gly Ala Gly Ala Gly Cys Cys Thr Cys Cys Gly Cys Thr Cys Cys  
245 250 255

Cys Thr Gly Cys Ala Thr Cys Thr Thr Gly Ala Cys Ala Gly Cys Ala  
260 265 270

Ala Thr Cys Gly Gly Cys Thr Gly Cys Cys Ala Ala Gly Cys Cys Thr  
275 280 285

Thr Gly Gly Gly Ala Gly Gly Ala Cys Ala Cys Cys Cys Thr Cys  
290 295 300

Cys Gly Gly Gly Cys Cys Thr Gly Gly Thr Cys Ala Ala Cys Cys  
305 310 315 320

Thr Gly Cys Ala Gly Cys Ala Cys Cys Thr Thr Ala Thr Cys Gly Thr  
325 330 335

Gly Ala Ala Cys Ala Ala Cys Ala Ala Cys Cys Ala Gly Cys Thr Gly  
340 345 350

Gly Gly Cys Gly Gly Cys Ala Thr Cys Gly Cys Ala Gly Ala Thr Gly  
355 360 365

Ala Gly Gly Cys Thr Thr Thr Gly Ala Gly Ala Cys Thr Thr  
370 375 380

Cys Cys Thr Gly Cys Thr Gly Ala Cys Ala Thr Thr Gly Gly Ala Gly  
385 390 395 400

Gly Ala Thr Cys Thr Gly Gly Ala Cys Cys Thr Cys Thr Cys Cys Thr  
405 410 415

Ala Cys Ala Ala Cys Ala Ala Cys Cys Thr Cys Cys Ala Thr Gly Gly  
420 425 430

Cys Cys Thr Gly Cys Cys Gly Thr Gly Gly Ala Cys Thr Cys Cys  
435 440 445

Gly Thr Gly Cys Gly Ala Cys Gly Cys Ala Thr Gly Gly Thr Cys Ala  
450 455 460

Ala Cys Cys Thr Cys Cys Ala Cys Cys Ala Gly Cys Thr Gly Ala Gly  
465 470 475 480

Cys Cys Thr Gly Gly Ala Cys Cys Ala Cys Ala Ala Cys Cys Thr Gly  
485 490 495

Cys Thr Gly Gly Ala Thr Cys Ala Cys Ala Thr Cys Gly Cys Cys Gly  
500 505 510

Ala Gly Gly Cys Ala Cys Cys Thr Thr Thr Gly Cys Ala Gly Ala  
515 520 525

Cys Cys Thr Gly Cys Ala Gly Ala Ala Ala Cys Thr Gly Gly Cys Cys  
530 535 540

Cys Gly Cys Cys Thr Gly Gly Ala Thr Cys Thr Cys Ala Cys Cys Thr  
545 550 555 560

Cys Cys Ala Ala Thr Cys Gly Gly Cys Thr Gly Cys Ala Gly Ala Ala  
565 570 575

Gly Cys Thr Gly Cys Cys Cys Cys Cys Thr Gly Ala Thr Cys Cys Cys  
580 585 590

Ala Thr Cys Thr Thr Thr Gly Cys Cys Cys Gly Cys Thr Cys Cys Cys  
595 600 605

Ala Gly Gly Cys Thr Thr Cys Gly Gly Cys Thr Thr Thr Gly Ala Cys  
610 615 620

Ala Gly Cys Cys Ala Cys Ala Cys Cys Cys Thr Thr Thr Gly Cys Cys  
625 630 635 640

Cys Cys Ala Cys Cys Cys Thr Thr Gly Thr Cys Cys Thr Thr Ala  
645 650 655

Gly Thr Thr Thr Gly Gly Gly Gly Thr Ala Ala Cys Cys Cys  
660 665 670

Ala Cys Thr Thr Cys Ala Cys Thr Gly Cys Ala Ala Thr Thr Gly Thr  
675 680 685

Gly Ala Gly Cys Thr Thr Cys Thr Gly Gly Cys Thr Gly Cys  
690 695 700

Gly Gly Ala Gly Gly Cys Thr Cys Gly Ala Gly Cys Gly Gly Gly Ala  
705 710 715 720

Cys Gly Ala Thr Gly Ala Cys Cys Thr Gly Gly Ala Ala Ala Cys Cys  
725 730 735

Thr Gly Thr Gly Gly Cys Thr Cys Cys Cys Ala Gly Gly Gly  
740 745 750

Gly Cys Cys Thr Cys Ala Ala Gly Gly Thr Cys Gly Cys Thr Ala  
755 760 765

Cys Thr Thr Cys Thr Gly Gly Cys Ala Thr Gly Thr Gly Cys Gly Thr  
770 775 780

Gly Ala Gly Gly Ala Gly Gly Ala Gly Thr Thr Thr Gly Thr Gly Thr  
785 790 795 800

Gly Cys Gly Ala Gly Cys Cys Gly Cys Cys Thr Cys Thr Cys Ala Thr  
805 810 815

Cys Ala Cys Cys Cys Ala Gly Cys Ala Cys Ala Cys Ala Cys  
820 825 830

Ala Ala Gly Thr Thr Gly Cys Thr Gly Gly Thr Thr Cys Thr Gly Gly  
835 840 845

Ala Gly Gly Cys Cys Ala Gly Gly Cys Gly Gly Cys Cys Ala Cys  
850 855 860

Ala Cys Thr Cys Ala Ala Gly Thr Gly Cys Ala Ala Ala Gly Cys Cys  
865                    870                    875                    880

Ala Thr Thr Gly Gly Gly Ala Cys Cys Cys Cys Ala Gly Cys Cys  
885                    890                    895

Cys Cys Cys Thr Thr Ala Thr Cys Cys Ala Cys Thr Gly Gly Thr  
900                    905                    910

Ala Gly Cys Cys Cys Cys Gly Ala Thr Gly Ala Cys Cys Gly Cys  
915                    920                    925

Cys Thr Gly Gly Thr Ala Gly Gly Ala Ala Cys Thr Cys Cys Thr  
930                    935                    940

Cys Ala Ala Gly Gly Ala Cys Cys Gly Cys Thr Gly Thr Cys Thr Ala  
945                    950                    955                    960

Thr Gly Ala Cys Ala Ala Thr Gly Gly Cys Ala Cys Cys Cys Thr Gly  
965                    970                    975

Gly Ala Cys Ala Thr Cys Thr Cys Ala Thr Cys Ala Cys Cys Ala  
980                    985                    990

Cys Ala Thr Cys Thr Cys Ala Gly Gly Ala Cys Ala Gly Thr Gly Gly  
995                    1000                    1005

Thr Gly Cys Cys Thr Thr Cys Ala Cys Cys Thr Gly Cys Ala Thr Thr  
1010                    1015                    1020

Gly Cys Thr Gly Cys Cys Ala Ala Thr Gly Cys Thr Gly Cys Cys Gly  
1025                    1030                    1035                    1040

Gly Ala Gly Ala Gly Gly Cys Cys Ala Cys Gly Gly Cys Cys Ala Thr  
1045                    1050                    1055

Gly Gly Thr Gly Ala Gly Gly Thr Cys Thr Cys Cys Ala Thr Cys  
1060                    1065                    1070

Gly Thr Cys Cys Ala Gly Cys Thr Gly Cys Cys Ala Cys Ala Cys Cys  
1075                    1080                    1085

Thr Cys Ala Gly Cys Ala Ala Cys Ala Gly Cys Ala Cys Cys Ala Gly  
1090                    1095                    1100

Cys Cys Gly Cys Ala Cys Thr Gly Cys Ala Cys Cys Cys Cys Cys Cys  
1105                    1110                    1115                    1120

Ala Ala Gly Thr Cys Cys Cys Gly Cys Cys Thr Cys Thr Cys Ala Gly  
1125 1130 1135

Ala Cys Ala Thr Cys Ala Cys Thr Gly Gly Cys Thr Cys Cys Ala Gly  
1140 1145 1150

Cys Ala Ala Gly Ala Cys Cys Ala Gly Cys Cys Gly Gly Gly Ala  
1155 1160 1165

Gly Gly Thr Gly Gly Ala Gly Gly Cys Ala Gly Thr Gly Gly Gly  
1170 1175 1180

Gly Cys Gly Gly Ala Gly Ala Gly Cys Cys Thr Cys Cys Cys Ala Ala  
1185 1190 1195 1200

Ala Ala Gly Cys Cys Cys Cys Cys Gly Gly Ala Ala Cys Gly Gly  
1205 1210 1215

Gly Cys Thr Gly Thr Gly Cys Thr Thr Gly Thr Gly Thr Cys Thr Gly  
1220 1225 1230

Ala Ala Gly Thr Gly Ala Cys Cys Ala Cys Cys Ala Cys Cys Thr Cys  
1235 1240 1245

Gly Gly Cys Cys Cys Thr Gly Gly Thr Cys Ala Ala Gly Thr Gly Gly  
1250 1255 1260

Thr Cys Thr Gly Thr Cys Ala Gly Cys Ala Ala Gly Thr Cys Ala Gly  
1265 1270 1275 1280

Cys Ala Cys Cys Cys Cys Gly Gly Thr Gly Ala Ala Gly Ala Thr  
1285 1290 1295

Gly Thr Ala Cys Cys Ala Gly Cys Thr Gly Cys Ala Gly Thr Ala Cys  
1300 1305 1310

Ala Ala Cys Thr Gly Cys Thr Cys Thr Gly Ala Cys Gly Ala Thr Gly  
1315 1320 1325

Ala Gly Gly Thr Ala Cys Thr Gly Ala Thr Thr Thr Ala Cys Ala Gly  
1330 1335 1340

Gly Ala Thr Gly Ala Thr Cys Cys Cys Ala Gly Cys Cys Thr Cys Cys  
1345 1350 1355 1360

Ala Ala Cys Ala Ala Gly Gly Cys Cys Thr Thr Cys Gly Thr Gly Gly  
1365 1370 1375

Thr Cys Ala Ala Cys Ala Ala Cys Cys Thr Gly Gly Thr Gly Thr Cys  
1380 1385 1390

Ala Gly Gly Gly Ala Cys Thr Gly Gly Cys Thr Ala Cys Gly Ala Cys  
1395 1400 1405

Thr Thr Gly Thr Gly Thr Gly Cys Thr Gly Gly Cys Cys Ala  
1410 1415 1420

Thr Gly Thr Gly Gly Ala Thr Gly Ala Cys Ala Cys Ala Gly Cys  
1425 1430 1435 1440

Cys Ala Cys Gly Ala Cys Ala Cys Thr Cys Ala Cys Gly Gly Cys Cys  
1445 1450 1455

Ala Cys Cys Ala Ala Cys Ala Thr Cys Gly Thr Gly Gly Cys Thr  
1460 1465 1470

Gly Cys Gly Cys Cys Cys Ala Gly Thr Thr Cys Thr Thr Cys Ala Cys  
1475 1480 1485

Cys Ala Ala Gly Gly Cys Thr Gly Ala Cys Thr Ala Cys Cys Cys Gly  
1490 1495 1500

Cys Ala Gly Thr Gly Cys Cys Ala Gly Thr Cys Cys Ala Thr Gly Cys  
1505 1510 1515 1520

Ala Cys Ala Gly Cys Cys Ala Gly Ala Thr Thr Cys Thr Gly Gly Gly  
1525 1530 1535

Cys Gly Gly Cys Ala Cys Cys Ala Thr Gly Ala Thr Cys Cys Thr Gly  
1540 1545 1550

Gly Thr Cys Ala Thr Cys Gly Gly Gly Gly Cys Ala Thr Cys Ala  
1555 1560 1565

Thr Cys Gly Thr Gly Gly Cys Cys Ala Cys Gly Cys Thr Gly Cys Thr  
1570 1575 1580

Gly Gly Thr Cys Thr Thr Cys Ala Thr Cys Gly Thr Cys Ala Thr Cys  
1585 1590 1595 1600

Cys Thr Cys Ala Thr Gly Gly Thr Gly Cys Gly Cys Thr Ala Cys Ala  
1605 1610 1615

Ala Gly Gly Thr Cys Thr Gly Cys Ala Ala Cys Cys Ala Cys Gly Ala  
1620 1625 1630

Gly Gly Cys Cys Cys Cys Ala Gly Cys Ala Ala Gly Ala Thr Gly  
1635 1640 1645

Gly Cys Ala Gly Cys Gly Gly Cys Cys Gly Thr Gly Ala Gly Cys Ala  
1650 1655 1660

Ala Thr Gly Thr Gly Thr Ala Cys Thr Cys Gly Cys Ala Gly Ala Cys  
1665 1670 1675 1680

Cys Ala Ala Cys Gly Gly Cys Cys Cys Ala Gly Cys Cys Ala  
1685 1690 1695

Cys Cys Gly Cys Cys Thr Cys Cys Ala Ala Gly Cys Ala Gly Cys Gly  
1700 1705 1710

Cys Ala Cys Cys Ala Gly Cys Cys Gly Gly Gly Cys Cys Cys Cys  
1715 1720 1725

Gly Cys Cys Gly Cys Ala Gly Gly Cys Cys Cys Gly Cys Cys Gly  
1730 1735 1740

Ala Ala Gly Gly Thr Gly Gly Thr  
1745 1750

<210> 21  
<211> 581  
<212> PRT  
<213> Homo sapiens

<400> 21  
Ala Val Val Asp Ala Cys Pro Lys Tyr Cys Val Cys Gln Asn Leu Ser  
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Glu Ser Leu Gly Thr Leu Cys Pro Ser Lys Gly Leu Leu Phe Val Pro  
20 25 30

Pro Asp Ile Asp Arg Arg Thr Val Glu Leu Arg Leu Gly Gly Asn Phe  
35 40 45

Ile Ile His Ile Ser Arg Gln Asp Phe Ala Asn Met Thr Gly Leu Val  
50 55 60

Asp Leu Thr Leu Ser Arg Asn Thr Ile Ser His Ile Gln Pro Phe Ser  
65 70 75 80

Phe Leu Asp Leu Glu Ser Leu Arg Ser Leu His Leu Asp Ser Asn Arg  
85 90 95

Leu Pro Ser Leu Gly Glu Asp Thr Leu Arg Gly Leu Val Asn Leu Gln  
100 105 110

His Leu Ile Val Asn Asn Asn Gln Leu Gly Gly Ile Ala Asp Glu Ala  
115 120 125

Phe Glu Asp Phe Leu Leu Thr Leu Glu Asp Leu Asp Leu Ser Tyr Asn  
130 135 140

Asn Leu His Gly Leu Pro Trp Asp Ser Val Arg Arg Met Val Asn Leu  
145 150 155 160

His Gln Leu Ser Leu Asp His Asn Leu Leu Asp His Ile Ala Glu Gly  
165 170 175

Thr Phe Ala Asp Leu Gln Lys Leu Ala Arg Leu Asp Leu Thr Ser Asn  
180 185 190

Arg Leu Gln Lys Leu Pro Pro Asp Pro Ile Phe Ala Arg Ser Gln Ala  
195 200 205

Ser Ala Leu Thr Ala Thr Pro Phe Ala Pro Pro Leu Ser Phe Ser Phe  
210 215 220

Gly Gly Asn Pro Leu His Cys Asn Cys Glu Leu Leu Trp Leu Arg Arg  
225 230 235 240

Leu Glu Arg Asp Asp Asp Leu Glu Thr Cys Gly Ser Pro Gly Gly Leu  
245 250 255

Lys Gly Arg Tyr Phe Trp His Val Arg Glu Glu Glu Phe Val Cys Glu  
260 265 270

Pro Pro Leu Ile Thr Gln His Thr His Lys Leu Leu Val Leu Glu Gly  
275 280 285

Gln Ala Ala Thr Leu Lys Cys Lys Ala Ile Gly Asp Pro Ser Pro Leu  
290 295 300

Ile His Trp Val Ala Pro Asp Asp Arg Leu Val Gly Asn Ser Ser Arg  
305 310 315 320

Thr Ala Val Tyr Asp Asn Gly Thr Leu Asp Ile Phe Ile Thr Thr Ser  
325 330 335

Gln Asp Ser Gly Ala Phe Thr Cys Ile Ala Ala Asn Ala Ala Gly Glu  
340 345 350

|   |     |     |
|---|-----|-----|
| Ala Thr Ala Met Val Glu Val Ser Ile Val Gln Leu Pro His Leu Ser |     |     |
| 355   | 360 | 365 |
| Asn Ser Thr Ser Arg Thr Ala Pro Pro Lys Ser Arg Leu Ser Asp Ile |     |     |
| 370   | 375 | 380 |
| Thr Gly Ser Ser Lys Thr Ser Arg Gly Gly Gly Ser Gly Gly Gly     |     |     |
| 385   | 390 | 395 |
| Glu Pro Pro Lys Ser Pro Pro Glu Arg Ala Val Leu Val Ser Glu Val |     |     |
| 405   | 410 | 415 |
| Thr Thr Thr Ser Ala Leu Val Lys Trp Ser Val Ser Lys Ser Ala Pro |     |     |
| 420   | 425 | 430 |
| Arg Val Lys Met Tyr Gln Leu Gln Tyr Asn Cys Ser Asp Asp Glu Val |     |     |
| 435   | 440 | 445 |
| Leu Ile Tyr Arg Met Ile Pro Ala Ser Asn Lys Ala Phe Val Val Asn |     |     |
| 450   | 455 | 460 |
| Asn Leu Val Ser Gly Thr Gly Tyr Asp Leu Cys Val Leu Ala Met Trp |     |     |
| 465   | 470 | 475 |
| Asp Asp Thr Ala Thr Thr Leu Thr Ala Thr Asn Ile Val Gly Cys Ala |     |     |
| 485   | 490 | 495 |
| Gln Phe Phe Thr Lys Ala Asp Tyr Pro Gln Cys Gln Ser Met His Ser |     |     |
| 500   | 505 | 510 |
| Gln Ile Leu Gly Gly Thr Met Ile Leu Val Ile Gly Gly Ile Ile Val |     |     |
| 515   | 520 | 525 |
| Ala Thr Leu Leu Val Phe Ile Val Ile Leu Met Val Arg Tyr Lys Val |     |     |
| 530   | 535 | 540 |
| Cys Asn His Glu Ala Pro Ser Lys Met Ala Ala Val Ser Asn Val     |     |     |
| 545   | 550 | 555 |
| Tyr Ser Gln Thr Asn Gly Ala Gln Pro Pro Pro Pro Ser Ser Ala Pro |     |     |
| 565   | 570 | 575 |
| Ala Gly Ala Pro Pro   |     |     |
| 580   |     |     |

<211> 788

<212> PRT

<213> Unknown

<220>

<223> Description of Unknown Organism: KIAA\_predicted

<400> 22

Met Glu Thr Leu Leu Gly Gly Leu Leu Ala Phe Gly Met Ala Phe Ala  
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Val Val Asp Ala Cys Pro Lys Tyr Cys Val Cys Gln Asn Leu Ser Glu  
20 25 30

Ser Leu Gly Thr Leu Cys Pro Ser Lys Gly Leu Leu Phe Val Pro Pro  
35 40 45

Asp Ile Asp Arg Arg Thr Val Glu Leu Arg Leu Gly Gly Asn Phe Ile  
50 55 60

Ile His Ile Ser Arg Gln Asp Phe Ala Asn Met Thr Gly Leu Val Asp  
65 70 75 80

Leu Thr Leu Ser Arg Asn Thr Ile Ser His Ile Gln Pro Phe Ser Phe  
85 90 95

Leu Asp Leu Glu Ser Leu Arg Ser Leu His Leu Asp Ser Asn Arg Leu  
100 105 110

Pro Ser Leu Gly Glu Asp Thr Leu Arg Gly Leu Val Asn Leu Gln His  
115 120 125

Leu Ile Val Asn Asn Gln Leu Gly Gly Ile Ala Asp Glu Ala Phe  
130 135 140

Glu Asp Phe Leu Leu Thr Leu Glu Asp Leu Asp Leu Ser Tyr Asn Asn  
145 150 155 160

Leu His Gly Leu Pro Trp Asp Ser Val Arg Arg Met Val Asn Leu His  
165 170 175

Gln Leu Ser Leu Asp His Asn Leu Leu Asp His Ile Ala Glu Gly Thr  
180 185 190

Phe Ala Asp Leu Gln Lys Leu Ala Arg Leu Asp Leu Thr Ser Asn Arg  
195 200 205

Leu Gln Lys Leu Pro Pro Asp Pro Ile Phe Ala Arg Ser Gln Ala Ser

210

215

220

Ala Leu Thr Ala Thr Pro Phe Ala Pro Pro Leu Ser Phe Ser Phe Gly  
225 230 235 240

Gly Asn Pro Leu His Cys Asn Cys Glu Leu Leu Trp Leu Arg Arg Leu  
245 250 255

Glu Arg Asp Asp Asp Leu Glu Thr Cys Gly Ser Pro Gly Gly Leu Lys  
260 265 270

Gly Arg Tyr Phe Trp His Val Arg Glu Glu Glu Phe Val Cys Glu Pro  
275 280 285

Pro Leu Ile Thr Gln His Thr His Lys Leu Leu Val Leu Glu Gly Gln  
290 295 300

Ala Ala Thr Leu Lys Cys Lys Ala Ile Gly Asp Pro Ser Pro Leu Ile  
305 310 315 320

His Trp Val Ala Pro Asp Asp Arg Leu Val Gly Asn Ser Ser Arg Thr  
325 330 335

Ala Val Tyr Asp Asn Gly Thr Leu Asp Ile Phe Ile Thr Thr Ser Gln  
340 345 350

Asp Ser Gly Ala Phe Thr Cys Ile Ala Ala Asn Ala Ala Gly Glu Ala  
355 360 365

Thr Ala Met Val Glu Val Ser Ile Val Gln Leu Pro His Leu Ser Asn  
370 375 380

Ser Thr Ser Arg Thr Ala Pro Pro Lys Ser Arg Leu Ser Asp Ile Thr  
385 390 395 400

Gly Ser Ser Lys Thr Ser Arg Gly Gly Gly Ser Gly Gly Glu  
405 410 415

Pro Pro Lys Ser Pro Pro Glu Arg Ala Val Leu Val Ser Glu Val Thr  
420 425 430

Thr Thr Ser Ala Leu Val Lys Trp Ser Val Ser Lys Ser Ala Pro Arg  
435 440 445

Val Lys Met Tyr Gln Leu Gln Tyr Asn Cys Ser Asp Asp Glu Val Leu  
450 455 460

Ile Tyr Arg Met Ile Pro Ala Ser Asn Lys Ala Phe Val Val Asn Asn

|   |     |     |     |
|---|-----|-----|-----|
| 465   | 470 | 475 | 480 |
| Leu Val Ser Gly Thr Gly Tyr Asp Leu Cys Val Leu Ala Met Trp Asp |     |     |     |
| 485   | 490 | 495 |     |
| Asp Thr Ala Thr Thr Leu Thr Ala Thr Asn Ile Val Gly Cys Ala Gln |     |     |     |
| 500   | 505 | 510 |     |
| Phe Phe Thr Lys Ala Asp Tyr Pro Gln Cys Gln Ser Met His Ser Gln |     |     |     |
| 515   | 520 | 525 |     |
| Ile Leu Gly Gly Thr Met Ile Leu Val Ile Gly Gly Ile Ile Val Ala |     |     |     |
| 530   | 535 | 540 |     |
| Thr Leu Leu Val Phe Ile Val Ile Leu Met Val Arg Tyr Lys Val Cys |     |     |     |
| 545   | 550 | 555 | 560 |
| Asn His Glu Ala Pro Ser Lys Met Ala Ala Ala Val Ser Asn Val Tyr |     |     |     |
| 565   | 570 | 575 |     |
| Ser Gln Thr Asn Gly Ala Gln Pro Pro Pro Pro Ser Ser Ala Pro Ala |     |     |     |
| 580   | 585 | 590 |     |
| Gly Ala Pro Pro Gln Gly Pro Pro Lys Val Val Val Arg Asn Glu Leu |     |     |     |
| 595   | 600 | 605 |     |
| Leu Asp Phe Thr Ala Ser Leu Ala Arg Ala Ser Asp Ser Ser Ser Ser |     |     |     |
| 610   | 615 | 620 |     |
| Ser Ser Leu Gly Ser Gly Glu Ala Ala Gly Leu Gly Arg Ala Pro Trp |     |     |     |
| 625   | 630 | 635 | 640 |
| Arg Ile Pro Pro Ser Ala Pro Arg Pro Lys Pro Ser Leu Asp Arg Leu |     |     |     |
| 645   | 650 | 655 |     |
| Met Gly Ala Phe Ala Ser Leu Asp Leu Lys Ser Gln Arg Lys Glu Glu |     |     |     |
| 660   | 665 | 670 |     |
| Leu Leu Asp Ser Arg Thr Pro Ala Gly Arg Gly Ala Gly Thr Ser Ala |     |     |     |
| 675   | 680 | 685 |     |
| Arg Gly His His Ser Asp Arg Glu Pro Leu Leu Gly Pro Pro Ala Ala |     |     |     |
| 690   | 695 | 700 |     |
| Arg Ala Arg Ser Leu Leu Pro Leu Pro Leu Glu Gly Lys Ala Lys Arg |     |     |     |
| 705   | 710 | 715 | 720 |
| Ser His Ser Phe Asp Met Gly Asp Phe Ala Ala Ala Gly Gly Val     |     |     |     |

725

730

735

Val Pro Gly Gly Tyr Ser Pro Pro Arg Lys Val Ser Asn Ile Trp Thr  
740 745 750

Lys Arg Ser Leu Ser Val Asn Gly Met Leu Leu Pro Phe Glu Glu Ser  
755 760 765

Asp Leu Val Gly Ala Arg Gly Thr Phe Gly Ser Ser Glu Trp Val Met  
770 775 780

Glu Ser Thr Val

785